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ESTIMATES OF APPROPRIATIONS—OFFICE OF FARM MANAGEMENT, DEPARTMENT OF AGRICULTURE.

LETTER

FROM

THE ACTING SECRETARY OF THE TREASURY,

TRANSMITTING

COPY OF A COMMUNICATION FROM THE SECRETARY OF AGRICULTURE SUBMITTING REVISED ESTIMATES OF APPROPRIATIONS REQUIRED BY THE OFFICE OF FARM MANAGEMENT FOR THE FISCAL YEAR 1920.

MAY 26, 1919.—Referred to the Committee on Agriculture and ordered to be printed.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, May 26, 1919.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I have the honor to transmit herewith, for the consideration of Congress, copy of a communication from the Secretary of Agriculture of the 23d instant, submitting revised estimates of appropriations in the sum of \$611,990, required by the Office of Farm Management for the fiscal year 1920, to be substituted for the original estimates for this service in the Book of Estimates for 1920, pages 183 and 184. Net increase asked, \$306,900.

The necessity for the increase asked and the reasons for the submission of the estimates at this time are fully set forth in the letter of the Secretary of Agriculture herewith.

Respectfully,

L. S. ROWE,
Acting Secretary.

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, May 23, 1919.

The SECRETARY OF THE TREASURY.

SIR: I have the honor to transmit herewith a revised estimate of an appropriation for the work of the Bureau of Farm Management and Farm Economics (Office of Farm Management) during the fiscal year 1920, in lieu of the original estimate, which appears on pages 183 and 184 of the Book of Estimates.

As stated before the House Committee on Agriculture on January 6, 1919, the Office of Farm Management at that time was undergoing a process of reorganization. At my request a committee composed of recognized authorities on farm management and agricultural economic subjects made a thorough study of the activities of the office, with a view to enlarge the scope and increase the efficiency of the work and to outline definite methods of procedure to be followed in the study of farm-management problems, and especially the cost of producing agricultural products. The members of the committee were:

Prof. G. F. Warren, professor of farm management, State College of Agriculture, Ithaca, N. Y.

Prof. Andrew Boss, chief division of agronomy and farm management, State College of Agriculture, University Farm, St. Paul, Minn.

Dr. H. C. Taylor, head department of agricultural economics, State College of Agriculture, Madison, Wis.

Prof. J. A. Foord, professor of farm management, State College of Agriculture, Amherst, Mass.

Dr. J. I. Falconer, professor of rural economics, State College of Agriculture, Columbus, Ohio.

Prof. R. L. Adams, professor of agronomy, State College of Agriculture, Berkeley, Calif.

Mr. G. I. Christie, Assistant Secretary of Agriculture.

On February 26 this committee submitted a report to me, which I cordially approved and which has been published as Circular No. 132 of the office of the Secretary. A copy of this report is attached hereto. The recommendations made therein will result, I am sure, in placing the activities of the department in this difficult field on a broader and more satisfactory basis. It is impossible, however, with existing funds adequately to conduct the work on the enlarged scale suggested by the committee. After very careful consideration I am convinced that the sum named in the estimate will be required during the next fiscal year to effectively prosecute the work, the results of which will be increasingly in demand and will be especially helpful to the farmers in shaping their plans and to the Nation in considering important agricultural problems of many sorts. I hope that the full amount will be made available.

The recommendations of the committee may be summarized as follows:

1. CHANGE THE NAME OF THE OFFICE OF FARM MANAGEMENT TO BUREAU OF FARM MANAGEMENT AND FARM ECONOMICS.

In recognition of the work already accomplished in farm economics along with the investigational work in farm management, and in view of the great need for still further economic studies of the farming business, the committee recommends that the office be expanded to include both farm management and farm economics under the name of "Bureau of Farm Management and Farm Economics."

ESTIMATES OF APPROPRIATIONS, OFFICE OF FARM MANAGEMENT. 3

2. COOPERATION WITH STATE AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

It is recommended that the investigations of the Office of Farm Management requiring field work be carried on in cooperation with the State colleges and experiment stations. Some of the benefits of such cooperation would be—

- (1) To prevent duplication and to correlate activities.
- (2) To promote the development of State departments.
- (3) To unify the methods and improve the general character of all farm management work.

3. OUTLINE OF THE PROJECTS OF THE PROPOSED BUREAU.

ADMINISTRATION.

A. Business office.

B. Research work:

1. Cost of production.
2. Farm organization.
3. Farm finance and farm relations.
4. Farm labor.
5. Agricultural history and geography.
6. Land utilization (including land ownership and tenancy).
7. Farm-life studies.

C. Extension work.

Using these recommendations as a basis for the development of the activities of the bureau, separate conferences have been held for the purpose of outlining in greater detail the work proposed by the committee, and especially to consider the following projects:

- Cost of production.
- Farm organization.
- Land utilization.
- Farm-life studies.

These conferences were attended by the leading authorities of the country on the subjects under discussion; and as the work develops it is expected that further conferences will be called for the consideration of other lines of activity suggested by the committee. Copies of the reports submitted to me as a result of these conferences are attached hereto.

Work under a number of the projects is now actively under way and preparations are being made for the taking up of new lines of work as promptly as possible. The projects may be briefly outlined as follows:

COST OF PRODUCTION STUDIES.

The value and importance of cost of production studies are set forth very clearly in the report of the reorganization committee in the following language:

Cost of production studies are of value to the individual farmer and, at the same time, are helpful in ascertaining the economic status of farming as an industry.

From the standpoint of the individual farmer the primary purposes are:

- (1) To record the details of the farm business for reference.
- (2) To give an insight into the elements and interrelations of the different farm activities.
- (3) To furnish information that may enable the farmer to reduce costs or otherwise increase profits.
- (4) To make possible a comparison of the profitability of the different enterprises and combinations of enterprises.

The records secured by cost of production studies give data for analyzing the farm business, and thus are of fundamental importance in the whole program of agricultural research and education. The results of such studies on a number of farms where a given type of farming is practiced are useful not only to the farmers from whose farms the results were obtained, but are of value in showing other farmers how to improve their methods.

From the standpoint of the public, cost of production studies provide the facts which give a basis for intelligent judgment upon the probable effects of any given legislation or other public activity upon the farmer as a producer and as a citizen. Cost of production studies are therefore one of the means of providing the basic facts needed by legislators and price commissions in comparing the profits of competing lines of production and estimating necessary price.

The cost of production work, as outlined, has been placed under the supervision of Mr. F. W. Peck, formerly in charge of cost of production work at the University of Minnesota.

FARM ORGANIZATION.

The purpose of the investigations relating to farm organization is to develop the economic principles which underlie the management of a farm with a view to secure a maximum profit through a long series of years. The principal topics to be considered are:

- I. Types of farming:
 - (a) Determination of enterprises.
 - (b) Balance or combination of enterprises.
- II. Size of business (farm unit).
- III. Farm plan or layout.
- IV. Effective use of labor and equipment.
- V. Intensity of production.
- VI. Business methods.

FARM FINANCE AND FARM RELATIONS.

This project deals with credit, insurance, and taxation from the standpoint of their influence upon the activities of the farmer.

FARM LABOR STUDIES.

Under this project, attention will be given to such matters as trend of population, supply and movement of farm labor, as well as living and housing problems connected with the hired man. The subject of standards of supervision and compensation of farm labor also will be studied.

AGRICULTURAL HISTORY AND GEOGRAPHY.

This project involves a study of the trend of agricultural development, the relations of climate, soil and other geographic conditions to farm enterprises, farm operations, and types of farming. The work under it consists primarily of the preparation of the Atlas of American Agriculture.

LAND ECONOMICS (LAND UTILIZATION).

The land problems which confront both farmer and the State and Federal Governments are becoming more acute from year to year. A special committee called to consider and make recommendations regarding subjects to be studied in this field indicated the following principal topics for special consideration:

1. Land resources.
2. Land values.

3. Land ownership and tenancy.
4. Land settlement and colonization.
5. Land policies.

Dr. L. C. Gray, of Peabody College, who has given particular attention to land and tenancy problems for many years, has been placed in charge of this line of work.

FARM-LIFE STUDIES.

Farm-life studies are to be conducted with a view to make living conditions in the home and in the community more satisfactory to the farm family. To this end it was proposed by the conference on farm-life studies that information be secured concerning the following topics:

1. Rural home life.
2. Opportunities for social contacts in typical rural communities.
3. The relation of educational and religious institutions to farm-life problems.
4. Problems relating to geographical population groups, such as the relation of urban and rural populations, the shifting of rural populations, race elements in rural population.
5. Social aspects of tenancy and landlordism.
6. Rural organizations, their efficiency, scope, causes of success and failure.
7. Social aspects of various types of farm labor—the married and unmarried farm hand, seasonal labor, child labor.
8. The relation of various forms of disability—the aged, illiterate, defective, dependent, delinquent—the farm-life problems.
9. The social consequences of local disasters due to natural causes.
10. The social consequences of thrift and agencies for promoting thrift.

Prof. C. J. Galpin, of the University of Wisconsin, has been appointed to take charge of these investigations.

DEMONSTRATION ACTIVITIES (EXTENSION WORK).

The end in view in research work in farm management and farm economics is "better farming, better business, and better living." In order that this result may be secured, it is essential that the results be carried to the farmer on his own farm. Publication alone is not adequate, and the committee suggested that a few men in the Bureau of Farm Management should devote their energies to planning methods of disseminating to the farmers the conclusions of research through the States Relations Service.

The task of carrying out this program has been assigned to Dr. H. C. Taylor, who has been appointed Chief of the Office of Farm Management. Dr. Taylor, before accepting this position, owned and operated a farm in Wisconsin, and also was head of the department of agricultural economics in the department of agriculture, University of Wisconsin. He stands as one of the leaders among those dealing with problems of rural economics and farm management. As indicated, the department has also secured the services of Mr. Francis W. Peck, of the University of Minnesota, who has had wide experience in the studies of cost of producing farm products, to take charge, under Dr. Taylor's direction, of the enlarged activities in this important field; of Dr. L. C. Gray, of Peabody College, to direct the work relating to land economics; and of Prof. C. J. Galpin, of the University of Wisconsin, to supervise the farm-life studies which the reorganized office will undertake. This is in accordance with and a part of the

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plan to secure some of the best available minds in the country to direct the work relating to farm management and farm economics, and particularly the studies of the cost of production.

Having secured such experts as these to direct the principal activities, I am confident that the work proposed will be executed in a highly satisfactory way and that facts and information of immense value to individual farmers in dealing with their own problems, and also to the Nation for its guidance in considering broad agricultural policies, will be secured and made available. I therefore earnestly hope that the program will be accepted as outlined and that the appropriations asked for will be provided at the earliest possible moment.

Respectfully,

D. F. HOUSTON, *Secretary.*

REPORT OF COMMITTEE APPOINTED BY THE SECRETARY OF AGRICULTURE TO CONSIDER THE SUBJECT OF FARM-LIFE STUDIES.

In accordance with the recommendations of the committee appointed by the Secretary of Agriculture to consider plan of organization, scope of work, and projects for the Office of Farm Management (Circular No. 152, Office of the Secretary), it is proposed to transfer to the Office of Farm Management (Bureau of Farm Management and Farm Economics) the farm-life studies heretofore conducted in the Bureau of Markets in connection with its rural organization project. Much valuable work has been done under this project in the Bureau of Markets, but since that bureau deals almost exclusively with a specialized farm problem—marketing—while the proposed Bureau of Farm Management and Farm Economics must necessarily conceive of the farm as a whole and its relations to the community and to the Nation, it seems logical and desirable that the work in this field should be supervised by the latter bureau. The Bureau of Markets, of course, will continue to consider cooperation so far as it affects the marketing of farm products and the two agencies will work in cooperation where their projects touch.

At the request of the Secretary of Agriculture a committee composed of rural social workers and students of farm-life problems met in Washington May 1, 2, and 3 to outline the work to be undertaken in farm-life studies by the proposed Bureau of Farm Management and Farm Economics. The committee outlined the subjects which require investigation, suggested methods of cooperation with the State colleges and experiment stations, with the other bureaus and departments of the Federal Government, and with the various social agencies at work throughout the United States. The report of this committee has met with the hearty approval of the Secretary of Agriculture and is published in full in the following pages.

CHARLES L. GALPIN APPOINTED TO HEAD THIS WORK.

On May 12, 1919, Prof. Charles J. Galpin, in charge of country life studies in the College of Agriculture in the University of Wisconsin, was appointed by the Secretary of Agriculture as economist in charge of farm life studies.

Prof. Galpin was born at Hamilton, N. Y., in 1864; reared on farm and in village; graduated with A. B. degree from Colgate University in 1885; studied social science in Harvard University and received the degree of A. M. from that institution in 1895. He was professor of history in Kalamazoo College from 1888 to 1891 and in charge of the Union Academy at Bellville, N. Y., from 1891 to 1901, where he established one of the first courses in agriculture in secondary schools in the State of New York. Since 1911 Prof. Galpin has been in charge of the country life studies at the University of Wisconsin and has made some of the most careful inductive studies of farm life problems and published some of the most stimulating reports available in this field.

Prof. Galpin comes to the department unusually well prepared to give a new stimulus to the work in this field, not only in the department but throughout the United States. Both the Department of Agriculture and the people of the United States are to be congratulated on having his services at their command.

G. I. CHRISTIE, *Assistant Secretary.*

MAY 21, 1919.

Hon. D. F. HOUSTON,
Secretary of Agriculture.

DEAR MR. SECRETARY: The committee called by you for consideration and discussion of the subject of farm-life studies as one of the divisions of the research work of the proposed Bureau of Farm Management and Farm Economics, submits the following report:

We have considered principally these subjects:

1. An outline of the subject matter which can come logically under the head of farm-life studies.
2. Suggestions for cooperation with the State colleges and experiment stations in the carrying on of farm-life studies.
3. Suggestions for cooperation with the Bureau of the Census and other Federal agencies for the collection of data relating to farm life.
4. Lines of cooperation with other social agencies.

In view of the growing importance of problems of life in rural communities we recommend that ample provision be made to enable the Bureau of Farm Management and Farm Economics to investigate the topics which we have outlined under the head of "Suggested fields of study," without, of course, subtracting anything from the work in farm management in the more strictly business sense.

We recommend also that the closest cooperation be sought with the Bureau of the Census in order to collect more information relating to our farm population as distinguished from what past censuses have called the rural population.

Respectfully submitted.

T. N. Carver, O. F. Hall, H. N. Morse, Mabel Carney, A. C. True, E. C. Branson, J. L. Dumas, F. O. Clark, Mrs. Oliver Wilson, H. E. Van Norman, Florence E. Ward, Edna N. White, Dwight Sanderson, C. W. Thompson, Geo. H. Von Tungeln, E. K. Eyerly, O. E. Baker, A. M. Loomis, Chas. A. Lory, L. C. Gray, C. J. Galpin, Bradford Knapp, H. C. Taylor, G. I. Christie.

FARM LIFE STUDIES.

The growth of national wealth makes possible the improvement of the conditions of life in farm homes and rural communities, as well as in towns and cities. Throughout the Nation, cities have given active attention to the improvement of living conditions. For many years efforts have been made by cities to provide desirable and satisfactory houses, schools, churches, streets, hospitals, medical service, recreation, sanitation, and other necessary modern improvements. The arts and institutions of modern civilization, however, have not been so rapidly introduced into the homes of the farmers and into the social life of the rural communities. This has been due partly to the smaller opportunity for human contact in the country than in the city and partly to the fact that some of the city conveniences can not be provided so economically on a small scale as on a large scale. Country progress has been further retarded by the tendency of farmers who have become prosperous to move to the city in order to enjoy its advantages, or to devote their means to buying more land rather than to the improvement of the conditions of life in their homes and neighborhood.

Agricultural production has increased materially during recent years through the use of improved machinery, seeds, live stock, and farm methods. Farmers are demanding and should receive fair prices for these products. It is understood and admitted by all that if farming is to be attractive and profitable the farmer must receive a reasonable return on his labor and investment. The economic side of agriculture should continue to be emphasized and advanced. But if American agriculture is to develop in a large and satisfactory way, the conditions of farm life must improve in many communities. As the Secretary of Agriculture stated in his remarks before this conference: "Merely making farming profitable will not solve the problem. Very many farmers become prosperous and move to town. We must make the farm comfortable, attractive, and healthful."

The people on the farms should have the same opportunities for education, worship, recreation, and social contact as the people in the cities and towns. There should be within easy reach of farm people suitable and satisfactory hospitals and medical service. The farm home should be adapted to the social needs of the family and should have modern equipment. If paved streets are desirable and necessary in the city, roads in the country which can be used both winter and summer for the transportation of farm products and the easy and convenient movement of the people between country and town are equally necessary and should be provided. The natural opportunities for a full life in the country are better than in the city and with the increase in production and income it is now possible to bring into many

farm homes and rural communities the conveniences and institutions which make for comfort and an efficient wholesome life.

In many rural communities splendid results already have been achieved in providing the facilities of modern civilization and in organizing for the maintenance of a vigorous social life. In other rural districts little, if any, progress has been made. It is desirable to study the causes of failure and the conditions of success, to determine the actual needs in different localities and develop plans and methods which will help farmers in their efforts to reach out for the better things of life. The following list of topics is submitted as an outline of the subjects which should thus be studied with a view to facilitating advancement in the life of American farmers and their families.

SUGGESTED FIELDS OF STUDY.

I. Rural home life.

- (a) The farmer's wife, the boy, the girl.
 - (1) Their attitude toward farm life.
 - (2) Their part in the work of the farm.
 - (3) Their relation to the income of the farm.
 - (4) Their interest in the management of the farm.
 - (5) Facilities for safeguarding their health and caring for them in sickness.
 - (6) Their opportunities for contact with the world outside the home.
- (b) The farmhouse.
 - (1) Its structural adaptation to the promotion of social life.
 - (2) Equipment for the promotion of family comfort.
 - (3) Its equipment for the promotion of social life, such as vehicles, musical instruments, etc.
 - (4) Its surroundings in the way of beautification, shade trees, etc.

II. Opportunities for social contacts in typical rural communities.

- (a) Social gatherings.
- (b) Entertainments.
- (c) Recreational activities.
- (d) Influence of improved means of communication and transportation.
- (e) Race elements and social classes as affecting social life.

III. The relation of educational and religious institutions to farm-life problems.

- (a) Elementary schools.
- (b) Secondary schools.
- (c) Higher institutions of learning.
- (d) Rural churches.
- (e) Other religious institutions.

IV. Problems relating to geographical population groups.

- (a) Their definition.
 - (1) The neighborhood.
 - (2) The rural community.
 - (3) The country village.
 - (4) Other geographical units.
- (b) Their planning and organization.
 - (1) Mapping.
 - (2) Surveying.
 - (3) Organization.
 - (4) Government.
- (c) Community centers, buildings, etc.
- (d) The relation of urban and rural populations.
- (e) The shifting of rural populations.

V. Rural organizations (without definite geographical boundaries).

- (a) A directory of rural organizations.
- (b) Types of rural organization.
 - (1) Their efficiency.
 - (2) Their principles of success.
 - (3) Extent and causes of failure.
 - (4) Their scope.
 - (5) Their activities.
 - (6) Their results.

VI. Social aspects of tenancy and landlordism.

- (a) The cause of tenancy.
- (b) The shifting of the tenant population.
- (c) Effect upon rural life and institutions.

VI. Special aspects of tenancy and landlordism—Continued.

- (d) Effect upon town and village life.
- (e) Social responsibilities of landlords and tenants.
- (f) The retired farmer.

VII. Social aspects of various types of farm labor.

- (a) The married farm hand.
- (b) The unmarried farm hand.
- (c) The seasonal laborer.
- (d) Household help.
- (e) Child labor.

VIII. The relation of various forms of disability to farm life problems.

- (a) The aged.
- (b) The infirm.
- (c) The illiterate.
- (d) The defective.
- (e) The dependent.
- (f) The delinquent.
- (g) The neglected.

IX. The social consequence of local disasters due to natural causes.**X. The social consequences of thrift and agencies for promoting thrift.**

- (a) Savings institutions.
- (b) "Blue Sky" laws.
- (c) Information as to safe and unsafe investment.
- (d) Rural credit organizations.

The fundamental unit of rural social organization is the home. The farm home is also in large measure the basis of national welfare, because it is the source and support not only of country life but also to a considerable degree of city life and leadership. The attitude of the farmer's wife, the boy, the girl, toward farm life is, therefore, a matter of great importance, as is also their health and welfare. Their attitude toward farm life is determined not in small measure by the farmhouse—its adaptation to the promotion of social life, to economy of labor in household work, and to family comfort. For these reasons rural home life is given first place in the suggested fields of study.

Outside contacts add much to the life of any farm home, however excellent its appointments may be. Very important among the institutions which provide these outside contacts are the school and the church. Wherever the school and church decline in efficiency and in the respect and affection of the people, the more intelligent and able members of the community gradually move away, and both cultural and racial decay set in. On the other hand, in those places where the school and the church are progressive and are endeavoring to meet the needs of the community the countryside usually is prosperous and the people contented. The study of educational and religious institutions in relation to farm life is, therefore, scarcely less important than the study of the rural home.

The farm home has relations also to other homes in the neighborhood, to the country village where most of the trading is done, to the township or town, to the county seat and State capital, and, finally, to the distant city, where much of its products are sent for consumption and to which some of its boys and girls eventually will go. The relationships to these population groups deserve careful study.

Farm life is related also to many organizations without definite geographic boundaries. Some of these organizations are occupational or professional and aim to promote better farming, better living, and clearer thinking. Other rural organizations are of a philanthropic, social, or cultural nature. It is important to study these various organizations in relation to farm life and the causes of their success or failure.

In addition to studies relating to rural home life and to rural organizations, two other large fields deserve careful study; the first primarily economic and the second primarily biological.

Farm tenancy is an economic problem, but it also has important social aspects. Much confusion has arisen in discussions of tenancy which could be clarified by recognizing that in its social aspects tenancy presents two sides, a bright and a dark. Tenancy is the means by which many landless but ambitious and able young men acquire enough capital to buy a farm and enough experience to run it successfully. On the other hand, as retiring landowning farmers move into the cities the farms are not infrequently rented to tenants less capable and less cultured, who take little interest in local affairs, and who cause a gradual decline in the social and educational conditions of the community. Related to the tenancy problem in its social aspects is that of farm labor, household help, and child labor.

The treatment of rural disability—the defectives, dependents, delinquents—is a social problem deserving immediate attention. A study of this problem, your

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committee suggests, might advantageously be undertaken in cooperation with the Public Health Service and similar agencies.

Finally, the social effects of local disasters due to natural causes appear worthy of consideration, and also the social benefits of thrift and of agencies for promoting thrift, such as savings institutions, rural credit organizations, and the like.

REPORT OF COMMITTEE APPOINTED BY THE SECRETARY OF AGRICULTURE TO CONSIDER THE SUBJECT OF LAND ECONOMICS.

INTRODUCTION.

The right use of the land resources of the United States is a matter of first importance to our people. The relation of the food producer to the land has a profound influence upon his interest in his work as a producer and his interest in the conservation of the land which he cultivates. As the growth of population makes it desirable for agriculture to occupy new areas the land policy and the methods of settlement and colonization have a great influence upon the agriculture of the Nation and upon the welfare of the farm population.

With these problems in mind the Secretary of Agriculture invited a committee, consisting of leading students of the land problems, prominent leaders in agricultural development and representatives of various agricultural interests, to meet with members of the United States Department of Agriculture to assist in perfecting plans for investigations in land utilization and land tenure. The field of investigation is one of the seven main divisions provided for in the plan of reorganization of the Office of Farm Management, as outlined in Circular No. 132, Office of the Secretary, Department of Agriculture. The committee was asked to outline the field of investigation and to consider the cooperative relationships between the various Federal agencies and between Federal and State investigators in this comprehensive field.

The committee met in Washington May 15 to 17, inclusive, and submitted the following report, which was presented to the Secretary and met with his hearty approval:

DR. L. C. GRAY APPOINTED TO HEAD THIS WORK.

On April 25, 1919, Dr. L. C. Gray, professor of rural economics in George Peabody College for Teachers, was appointed by the Secretary of Agriculture as economist in charge of land economics, Office of Farm Management.

Dr. Gray was born in Missouri in 1881. He received the bachelor's degree from William Hewell College in 1900, and the master's degree from the same institution in 1903. He received the degree of doctor of philosophy in economics from the University of Wisconsin in 1911.

Dr. Gray has devoted his attention for many years to agricultural economics and particularly to the subject of land problems. He is the author of a number of articles on various aspects of this subject. For the past eight years Dr. Gray has been a teacher of economics, serving in this capacity in the University of Wisconsin, University of Saskatchewan, and George Peabody College for Teachers. He is a member of a number of scientific organizations, including the American Economic Association, the American Farm Economic Association, and the American Association for Agricultural Legislation.

Dr. Gray is especially qualified by training and experience to direct the work of the Division of Land Economics outlined in this report, and not only the Department of Agriculture, but the people of the United States are to be congratulated on having his services at their command.

G. I. CHRISTIE, Assistant Secretary.

MAY 22, 1919.

MAY 17, 1919.

Hon. D. F. HOUSTON,
Secretary of Agriculture.

DEAR MR. SECRETARY: The committee called by you for consideration and discussion of the subject of land utilization and land tenure as one of the divisions of research work of the proposed Bureau of Farm Management and Farm Economics, submit the following report.

We have considered principally the following subjects:

1. The name of this section which we recommend to be called "land economics."
2. An outline of the subject matter which should be included under the head of land economics.

3. Suggested cooperation with the other branches of the Government service in the collection of facts and the classification of land.

4. A resolution relating to the utilization of cut-over land.

In view of the great importance of the subject of land economics we recommend that ample provision be made to enable the Bureau of Farm Management and Farm Economics to investigate the topics we have outlined. We recommend also that the closest cooperation be sought not only with the other bureaus and departments, but also with the agricultural colleges and experiment stations and other agencies interested in land problems.

Respectfully submitted,

Charles L. Stewart, Theodore Macklin, J. A. Preus, Clement S. Ucker,
F. B. Linfield, J. N. Hagan, C. E. Allred, L. C. Gray, Milton Whitney
(per Thomas D. Rice), William A. Taylor, R. P. Brooks, Arlie Hopkins,
W. C. Mendenhall, Henry S. Graves, S. A. Lindsey, A. G. T. Moore,
Richard T. Ely, O. E. Baker, C. V. Piper, E. C. C. Chilcott Nat C.
Murray, H. T. Cory, G. I. Christie, H. C. Taylor, H. M. Cottrell, Chas. A.
Lyman, C. S. Scofield, Raphael Zon.

The conference called to outline the field of investigation in land economics, one of the divisions of the proposed Bureau of Farm Management and Farm Economics, together with the methods of coordinating the investigational activities of the division with those of other agencies, submits the following, which we believe to be a comprehensive outline of the field to be investigated:

LAND ECONOMICS.

- | | |
|--------------------------------|--------------------------------------|
| A. Land resources. | D. Land settlement and colonization. |
| B. Land values. | E. Land policies. |
| C. Land ownership and tenancy. | |

A. Land resources (considered from the standpoint of economic use).

I. Classification according to location, physical characteristics, ownership, and present uses.

1. Land not now in farms.
2. Land now in farms.

II. Land utilization.

1. Conditions which explain present use or nonuse.
2. Desirable changes in mode of use.
3. Costs of making such changes, and probable economic advantages.

B. Land values.

I. Comparative land values in various regions.

II. Changes in land values.

III. Relations of land values and land rents.

IV. Effect of community environment on land rents and land values.

V. Other conditions affecting land rent and land values.

C. Land ownership and tenancy.

I. Characteristics and relative extent.

1. Full ownership (classification by public and private, by race and nationality).

2. Common lands—extent, character of rights.

3. Mortgage indebtedness.

4. Tenancy.

(a) Extent and distribution.

(b) Increase in tenancy, absolute and relative.

(c) Forms of tenancy.

(d) Improvement of tenant contracts.

(e) Informal relations of landlords and tenants.

(f) Determination of unexhausted improvements and settlement of claims.

II. Conditions determining extent and character of land ownership and tenancy.

1. Inheritance and bequest.

2. Land values.

3. Physical conditions of regions and types of farming.

4. Personal characteristics of population and relative individual advantages.

5. Land policies.

6. Rural credit systems.

7. Time required for laborers and tenants to attain to ownership.

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C. Land ownership and tenancy—Continued.

III. Effects of ownership and tenancy in regard to—

1. Maintenance of soil fertility.
2. Productiveness per acre, per man, and per unit of invested capital.
3. Adequacy of farm improvements and equipment.
4. The choice of farm enterprises and methods of conducting them.
5. Distribution of farm income.
6. Standards of living and of thrift.
7. Shifting of rural population.

8. Community organization, cooperation, and special relationship.

D. Land settlement and colonization (in undeveloped and developed areas).

I. Selection of land and settlers.

II. Methods of settlement.

III. Agencies, public and private.

IV. Causes of success and failure.

V. Possible scope and rapidity of settlement.

E. Land policies.

I. Title registration and transfer.

II. Methods of facilitating acquisition of farms.

III. Land commissions or courts.

IV. Landlord's lien.

V. Land-selling agencies.

VI. Methods of alienating public land.

VII. Relation of taxation of land to land problems.

In considering the above outline it is apparent that a classification of lands from the standpoint of their economic utilization is a very necessary basis of studies in land economics.

The following agencies have more or less comprehensive data on the land resources of the country:

Department of Agriculture:

Bureau of Plant Industry.

Bureau of Soils.

Bureau of Crop Estimates.

Bureau of Animal Industry.

Office of Farm Management.

Forest Service.

States Relations Service.

Weather Bureau.

Biological Survey.

General Land Office.

United States Geological Survey.

United States Reclamation Service.

Federal Farm Loan Bureau.

Bureau of the Census.

The data gathered by these bureaus, however, have never been assembled, correlated, and appraised from the standpoint of economic utilization of the land. Your committee considers the need of such a classification, which should include all the actual or potential farm, grazing, and forest lands, as imperative. This classification can be based in part on data which have been gathered by various bureaus of this and other departments, as well as by States and other agencies. The resulting information, when supplemented by such field surveys as may be necessary, would be of immediate practical value in many ways; such as guiding the course of land settlement, determining the economically efficient size of farms in different localities, and directing wisely the agricultural energies of the country in the production of foodstuffs and raw materials.

We therefore recommend to the honorable Secretary of Agriculture that the Office of Farm Management be especially instructed to investigate the methods that have been employed in this and other countries in land classification, and, in cooperation with the agencies heretofore enumerated, adopt a practicable and comprehensive plan, which should be consummated as rapidly as possible.

It is evident that the rapidity of the progress of any plan of land classification will depend largely on the ability of the cooperating bureaus to furnish necessary physical and biological data. Provision will therefore be necessary to insure that such data be gathered as rapidly as needed to accomplish the task.

The problem of the classification of land from the standpoint of its economic use suggests the importance of studying all the conditions that tend to retard the complete and efficient use of the land resources of the United States and to affect unfavorably the welfare of those engaged in agricultural activity. The land question is, of

course, exceedingly complex. Certain aspects of the subject, however, require special emphasis.

The first of these considerations is the economic causes that prevent areas of land suitable for agriculture from being used. There are considerable areas in this and other countries which are withheld from use for various reasons, as, for instance, aggregation in large holdings, inadequate capital for improvement, insufficient facilities for transporting and marketing agricultural products, inertia of the population, and speculation. Similarly, there are other large areas where the use of lands for farming is wholly inadequate and wasteful, because of size of farms and land holdings, absenteeism, and forms of tenancy which provide insufficient motives for careful farming, provision of suitable improvements, and conservation of soil.

There can be no question that the rapid increase of tenancy in certain regions of America has aroused a profound interest in the cause of this movement and in its significance. While many causes have been suggested, comparatively little is known as to their relative importance. Careful investigation should be made with a view of assessing these causes at their relative weight.

Similarly, it is of vital importance that the question of the good and evil of tenancy as a method of holding land should receive earnest and adequate consideration. To some extent the evils of tenancy have been exaggerated and the good minimized because it has frequently assumed such forms in this country as inevitably result in conditions unfavorable to good farming and a wholesome rural civilization. Only by very careful investigation can the facts be secured which will indicate the relative advantages and disadvantages of the several forms of tenancy now in use in different regions of this and other countries. If some tenancy is not only inevitable but probably desirable, the Nation should be in a position to select those forms which are most wholesome in their consequences.

It is generally agreed that at least a large percentage of farmers should own the land which they live upon and cultivate. We believe, therefore, that the investigations conducted by the Division of Land Economics should be so directed as to determine what area of land will provide an economic holding under the varied conditions which prevail in different regions and what methods should be employed to facilitate the acquisition of farm land by laborers, tenants, and others actively connected with farming, not only in regions which are now undeveloped but also in those sections which are at present devoted to farming.

It is clear that in the settlement of undeveloped regions by the method of colonization under governmental direction the greatest care is required to ascertain in advance whether the conditions of soil, climate, topography, transportation, marketing facilities, and probable costs of production are favorable to successful farming. It is equally important to determine the economical size of holding, the amount of capital required, the kinds of crops and live stock most desirable, and the method of agriculture that should be employed. It is clear that the great resources of information available in this Department and its extensive machinery of investigation should be fully utilized in ascertaining these basic facts, which are so essential to the success and contentment of the settler.

Finally, since large areas of land are still owned by the Federal Government, by the States, and other divisions of government, careful study should be given to the problem of the most economical methods of using these areas while in public ownership. Facts are needed which will show what areas should be placed in the hands of private holders and by what methods the change of ownership may be most successfully realized, as well as what areas should be retained in public ownership. There is little question but that the policies employed in the past have frequently resulted in the sale of land in holdings which are uneconomical in size and without adequate safeguards to prevent the land being aggregated into unduly large holdings and into properties for speculation.

In view of the magnitude of the problems outlined in the above report and their profound significance in relation to the progress of the basic industry of farming, the welfare of the farming population, and the development of a wholesome rural civilization, we respectfully recommend that the agencies intrusted with the investigation of these problems be given the ample support necessary to make possible the accomplishment of the purposes emphasized in this report.

We recommend that the division in charge of these investigations be called "Land Economics," instead of "Land Utilization," as recommended by a former committee.

REPORT OF COMMITTEE APPOINTED BY THE SECRETARY OF AGRICULTURE TO CONSIDER PLAN OF ORGANIZATION, SCOPE OF WORK, AND PROJECTS.

Upon the request of the Secretary of Agriculture, a committee consisting of leading men in farm management and agricultural economics from the State agricultural colleges and the National Farm Management Association has given active assistance in suggesting and outlining future work for the Office of Farm Management. This committee was asked to consider a broader and more clearly defined field of operations for the Office of Farm Management, to determine the cooperative relationships that should exist between Federal and State investigators, and to outline methods of procedure in developing projects and especially in determining cost of production of agricultural products.

Prof. R. L. Adams, associate professor of agronomy in charge of farm management, was loaned to the Department of Agriculture by the University of California to serve as acting chief of the Office of Farm Management from January 1 to March 11. Dr. J. I. Falconer, head of the department of rural economics, Ohio State University, was also loaned to the department for the months of January and February to serve as leader in the studies relating to agricultural economics. These men were assisted by Dr. H. C. Taylor, head of the department of agricultural economics, University of Wisconsin; Dr. G. F. Warren, head of the department of farm management, Cornell University; Prof. Andrew Boss, chief, division of agronomy and farm management, University of Minnesota; Prof. J. A. Foord, chief, farm management, Massachusetts Agricultural College; Nat C. Murray, associate chief, Bureau of Crop Estimates; C. W. Thompson, specialist in rural organization, Bureau of Markets; and E. H. Thomson, assistant chief, and other representatives of the Office of Farm Management.

The first work of this group of men was to review briefly the activities of the Office of Farm Management and to outline methods of procedure to be followed in determining cost of production of agricultural products. This outline on cost of production was presented to the National Association of Farm Management workers at Baltimore January 9. Here the subject received a full discussion and many helpful suggestions were given by the various members. Immediately the plan was further outlined so as to include these suggestions and sent to workers in farm management and rural economics, deans of agricultural colleges, directors of experiment stations, directors of extension, and other agricultural workers in the various States for consideration and constructive criticism.

A meeting of the full committee was held at Washington, February 20-26, to give final consideration to the plans and to prepare a report covering the whole subject. The report of the committee was presented in person to the Secretary of Agriculture Wednesday, February 26. The Secretary expressed his appreciation of the excellent and helpful work of the committee and approved the recommendations. He further stated that the projects proposed could be started and carried out in large part with available funds and that the work should be pushed as rapidly and vigorously as possible. The proposed plan to carry on investigations and demonstrations in cooperation with the States met the hearty approval of the Secretary, since he has stood in a strong way throughout his administration for active, harmonious relationships between the State agricultural colleges and the United States Department of Agriculture.

The Secretary will submit to Congress the new plan of organization and ask for authorization to establish a Bureau of Farm Management and Farm Economics and that additional and adequate funds be provided to place these important activities on a broad and satisfactory basis.

The Secretary explained to the committee that for many months he had been seeking a man to serve as Chief of the Office of Farm Management and that he hoped to be able to secure at an early time one of the strongest and best qualified men engaged in the study of farm management and agricultural economics.

DR. H. C. TAYLOR APPOINTED AS CHIEF.

On March 8, 1919, Dr. H. C. Taylor, head of the department of agricultural economics in the college of agriculture, University of Wisconsin, was appointed by the Secretary of Agriculture as Chief of the Office of Farm Management, United States Department of Agriculture.

Dr. Taylor, born on an Iowa farm in 1873, completed his common-school education in his home community. He attended Drake University, 1891-1894; graduated from the Iowa Agricultural College in 1896, and received his doctor's degree from the University of Wisconsin in 1902. During the period of his training he specialized in economics not only in this country but abroad. Dr. Taylor has served as head of

the department of agricultural economics in the college of agriculture at Madison since 1908. He is one of the leading active members of the National Farm Management Association.

Dr. Taylor has not only taught some of the strongest courses administered in agricultural economics, but he has carried on investigations which have attracted the attention of the agricultural people in all parts of the United States. He has prepared many bulletins and articles which have meant much to the agricultural people in solving their problems. In addition to his work in the university, he has lived on a farm and personally operated it in a successful way during the past eight years. Therefore he comes to the department unusually well qualified to handle the large and important task of directing the many activities connected with farm management and farm economics.

While the department is to be congratulated on securing Dr. Taylor, agricultural people of the country are to be congratulated in a larger way on having his services at their command.

G. I. CHRISTIE, *Assistant Secretary.*

MARCH 12, 1919.

RECOMMENDATIONS OF COMMITTEE.

FEBRUARY 26, 1919.

Hon. DAVID F. HOUSTON,
Secretary of Agriculture.

DEAR MR. SECRETARY: Your committee appointed to consider methods of determining costs of production, review the projects of the Office of Farm Management, and suggest a working basis for cooperative work with the States begs leave to submit the following report:

We have reviewed the projects now under way and wish to commend their continuance and development. Owing to the importance of the work and the demand for it, we recommend that the office be made a Bureau of Farm Management and Farm Economics, with appropriate subdivisions, such as cost of production, farm organization, farm finance, farm labor, agricultural history and geography, land utilization, and country-life problems.

We further recommend that all the work of the Department of Agriculture dealing with farm management and farm economics be centered in this bureau and that work more nearly related to that of other bureaus be transferred to appropriate bureaus as rapidly as feasible. Many problems concern two bureaus, so that in many cases close cooperation is necessary.

We further recommend, so far as feasible, that arrangements be made for conducting the work in cooperation with the agricultural colleges and experiment stations.

We attach suggestions concerning the organization and research projects of the bureau, cooperative arrangements with States, and a detailed statement of recommended methods for cost of production studies.

Respectfully submitted.

G. F. WARREN.
ANDREW BOSS.
H. C. TAYLOR.
J. A. FOORD.
J. I. FALCONER.
R. L. ADAMS.
G. I. CHRISTIE.

ORGANIZATION AND PROJECT.

We have reviewed the projects now under way and wish to commend their continuance and development. There are numerous projects that should be continued, some of them possibly under other names. There are some projects which appear to be more nearly related to the subject of agronomy and some related to other subjects that should perhaps be transferred to some other bureau of the department, securing the information or data desired on these lines through cooperative relations rather than independent action. We find in the projects under way a considerable amount of work that could more properly be included under the term "Farm economics." This work is of great value in understanding the industry of agriculture and should be maintained and even further extended.

In recognition of the work already accomplished in farm economics along with the investigational work in farm management, and in view of the great need for still further economic studies of the farming business, the committee recommends that the office be expanded to include both farm management and farm economics under the name of "Bureau of Farm Management and Farm Economics." The work of the

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bureau could well be organized around the following projects. The nature of the work under these various projects is indicated by the names of a few subprojects proposed:

Administration.

Personnel—Chief and assistant chief.

Functions—Planning the work; supervision; correlation; editorial.

A. Business office.

B. Research work.

1. Cost of production.

- (a) Financial records.
- (b) Enterprise records.
- (c) Complete cost records.
- (d) Price relations.
- (e) Basic unit factors.

2. Farm organization.

- (a) Farm business analysis.
- (b) Farm practice.
- (c) Effective use of labor and equipment.

3. Farm finance.

- (a) Methods of financing.
- (b) Insurance.
- (c) Taxation.

4. Farm labor.

- (a) Supply and movement.
- (b) Trend of population
- (c) Living and housing problems.
- (d) Creating new productive enterprises for farm labor.
- (e) Standards of supervision and compensation for farm labor.

5. Agricultural history and geography.

- (a) Trend of agricultural development.
- (b) Shifts of agricultural production.
- (c) Relation of American to foreign agriculture.
- (d) Supervision of Atlas.

6. Land utilization.

- (a) Land resources and utilization.
- (b) Land settlement.
- (c) Land ownership and tenancy.

7. Farm life studies.

- (a) Cooperation and trend of cooperative movements as affecting the farmer's life and activities on the farm.
- (b) Agricultural relations to other industries.
- (c) Agriculture for industrial workers.
- (d) Conditions of farm life as affecting national welfare.

C. Extension work.

- (a) Publications and illustrative material.
- (b) Farm management demonstrations.
- (c) Farm labor supply.
- (d) Other farm economics demonstrations.

Cost of production and farm organization are both related closely to investigations of the individual farm and the problems of the individual farmer in organizing his business for definite results. It is important that each project be under the leadership of a man who understands the problems and methods of conducting, analyzing, and interpreting farm-management data.

Farm finance, farm labor, and agricultural history and geography treat more particularly of the economic aspects of group needs and movements and of the agricultural needs of the industry as a whole in its relation to other industries and the demands of increasing population.

Land utilization relates to the problems arising out of the relation of farmers to the land.

Farm-life studies treat of the economic and social aspect of farm life as affected by the character of agriculture as an industry. This would include consideration of such subjects as schools, roads, and health, as they affect farm life and activities.

The problems call for intelligent study by men trained for the work who should withhold a keen sympathy for farm life and treat it with a view to the welfare of the people who live in the country.

In order to secure competent men to lead these investigational projects it will be necessary to select them from men comparable to those acting as heads of departments

in the best colleges of agriculture, and their salaries must be comparable with the salaries of such men, including the extra pay they receive for summer work.

The salary for the chief of the bureau will need to be sufficiently large to attract a man comparable with the deans and directors of the best agricultural colleges and experiment stations.

COOPERATIVE RELATIONS BETWEEN THE OFFICE OF FARM MANAGEMENT AND STATE COLLEGES AND EXPERIMENT STATIONS FOR INVESTIGATIONAL WORK.

It is recommended that the investigations of the Office of Farm Management requiring field work be carried on in cooperation with the State colleges and experiment stations. Some of the benefits of such cooperation would be:

- (1) To prevent duplication and to correlate activities.
- (2) To promote the development of State departments.
- (3) To unify the methods and improve the general character of all farm management work.

Before the Federal department takes up a project in any State it should first ascertain what has already been done within the State. Before work upon such a project is undertaken opportunity for cooperation should first be considered. So far as practicable, personal consultation should be held with the proper State agencies with a view to securing their approval. A memorandum of agreement should be drawn up showing the purpose, nature, and extent of the work contemplated.

Data collected by cooperative effort should be equally available to both parties. Neither party should publish any of the data without consultation with the other party. In case of refusal to publish on the part of either party, the other party shall be free to publish the data on its own responsibility.

COST OF PRODUCTION STUDIES.

PURPOSE OF COST OF PRODUCTION STUDIES.

Cost of production studies are of value to the individual farmer and at the same time are helpful in ascertaining the economic status of farming as an industry.

From the standpoint of the individual farmer the primary purposes are:

- (1) To record the details of the farm business for reference.
- (2) To give an insight into the elements and interrelations of the different farm activities.
- (3) To furnish information that may enable the farmer to reduce costs, or otherwise increase profits.
- (4) To make possible a comparison of the profitability of the different enterprises and combinations of enterprises.

The records secured by cost of production studies give data for analyzing the farm business, and thus are of fundamental importance in the whole program of agricultural research and education. The results of such studies on a number of farms where a given type of farming is practiced are useful not only to the farmers from whose farms the results were obtained, but are of value in showing other farmers how to improve their methods.

From the standpoint of the public, cost of production studies provide the facts which give a basis for intelligent judgment upon the probable effects of any given legislation or other public activity upon the farmer as a producer and as a citizen. Cost of production studies are therefore one of the means of providing the basic facts needed by legislators and price commissions in comparing the profits of competing lines of production and estimating necessary price.

METHODS OF COST INVESTIGATION.

There are three ways of obtaining cost data—cost accounting, survey method, questionnaire sent by mail. The accounting method is based on complete records of all farm work and business transactions. Arrangements are made with farmers to keep detailed records of all operations and transactions in connection with the farm business. The work is supervised by personal visits to the farm. It is desirable that cost accounts be kept to obtain basic data. Cumulative results of such work become increasingly valuable.

By the survey method the necessary data are obtained from farmers by trained investigators. Some of the data are taken from the farmer's books; some from the books of persons to whom the farmer sells and from whom he buys; some from his bin, silo,

and building capacities; and some of the data are based on estimates made by the farmer.

Some of the advantages of the survey method are (1) it is a relatively inexpensive method of securing records from large numbers of farms, (2) records are obtained from all classes of farms, and (3) records are obtained after the close of the farm year, so that, when desired, areas more representative of normal conditions may be chosen. By the survey method it is sometimes difficult to determine the amount of general expense and miscellaneous labor, and the proper basis for apportioning such items to different enterprises. Unless the investigator is thoroughly experienced in the subject that he is studying, some items of importance may be omitted.

Both methods are useful and reliable when the work is carefully conducted. Either method may be used, but preferably both should be used. The detailed cost accounts serve as a check on the survey work, and the survey work shows the relationship of the farms on which cost accounts are kept to the average farm.

The questionnaire sent by mail can be used to advantage in securing supplementary data from large numbers of farmers. To secure the best results the questionnaire should cover only a limited number of cost items and the questions should be direct and clear.

COST ITEMS.

The items to be considered in cost of production studies will depend upon the enterprise under consideration. When the survey method is used it is essential that the list be complete enough so that no items will be omitted by either the farmer or the investigator. When the accounting method is used a classification that is broad enough to include all charges is needed, but the cost items will be developed in the working out of the records and will vary with the enterprise.

The following grouping is suggested for farm cost accounting work:

FARM ENTERPRISE COSTS.

Direct charges to farm enterprise accounts.

Labor.

- Man labor (including labor of men, women, and children).
- Animal labor.
- Mechanical labor (tractor and truck).

Materials.

- Crop materials.
 - Seed.
 - Fertilizer.
 - Twine.
 - Sprays.
- Stock materials.
 - Feed.
 - Bedding.

Cash.

- Selling.
- Insurance.
- Taxes.
- Thrashing.
- Veterinary.
- Breeding fees.

Investment.

- Depreciation of investment in live stock.
- Interest on investment in live stock.

Indirect charges to farm enterprise accounts (consisting of labor, material, cash, and investment costs that can not be charged as such to enterprise accounts, but which may be assembled under definite headings and distributed on the basis of use).

Use of mechanical equipment: Labor, materials, cash, and investment charges pertaining to mechanical equipment.

Use of buildings (and similar improvements): Labor, materials, cash, and investment charges pertaining to buildings.

Use of land and land improvements: Labor, materials, cash, and investment charges pertaining to land and land improvements.

Special charges: Manure, lime, breeding males, perennial crops.

General expenses or overhead: Labor, materials, cash, and investment charges that can not be charged direct or assembled under the other indirect cost headings.

Man labor.—The rate for man labor charges should be determined by computing the cost of wages, board, and other perquisites for both monthly and daily labor, including the services of the farmer for labor and supervision at the rate that another man could be hired to take his place. The total sum divided by the total number of hours gives the rate. Family labor should be charged at the amount it would cost to have the same work done by hired help.

In the case of crops or enterprises in which a large amount of labor is hired at a rate considerably higher or lower than the average rate, such labor should be charged at the actual rate paid rather than at the average rate of all labor for the year.

Horse labor.—Horse labor charges should be based on hourly rates, computed for an entire year for the work stock, by determining and adding: Care, feed, bedding, blacksmith, veterinary, direct cash expenditures not otherwise enumerated, interest, depreciation and upkeep of shelter, interest and depreciation on stock, less credits, as for appreciation, manure, and occasional outside work. If outside work is an important enterprise or if colts are raised separate accounts should be kept.

Purchased supplies.—Purchased supplies should be charged at cash cost including freight. The farm labor cost of handling and preparation for use should be charged to the proper labor account.

Supplies produced on the farm.—For supplies produced on the farm more or less arbitrary figures must be used.

Farm seeds.—Farm-grown products used for seed should be charged at the prices at which the crops from which they are taken are credited. Any additional labor costs of handling or preparing them for use should be charged to the proper labor account.

Stock feeds.—Purchased feed should be charged at cash cost including any freight. The farm cost of hauling should be charged to the proper labor account. Home-grown feeds that are readily marketable, when they enter into the production of another farm product, should be charged at the farm sale value; the farm sale value should ordinarily be based upon the average price during the period of feeding.

Crops grown solely for animal feed and having no market value should be charged at cost of production.

Either one or the other of the above principles, according to circumstances, should govern in determining the charge for silage.

Charge on permanent pasture should be in accordance with the principle used in determining land charge.

Home-grown products, such as straw, stover, beet tops, pasture of growing grain, etc., should be charged at market value, if there be such; if the number of sales in the community is not sufficient to establish market prices they should be charged at their appraised value.

Selling.—Selling expenses covering actual payments should be charged directly to the department involved.

Insurance.—Insurance premiums should be charged directly to the department involved, at the annual rate paid.

Taxes.—Taxes should be charged directly to the enterprise or department involved.

Implements.—The annual cost of each implement or group of implements should be based on a determination giving the yearly sum covering the expenses, as repairs, fuels, lubricants, labor of upkeep, depreciation, interest, and insurance, less credits as for machinery hired out. This charge is then to be apportioned to each enterprise on the basis of use, which may be stated in hours, acres, or other suitable base unit.

Farm improvements.—The charge for the use of farm improvements, including buildings, water systems, etc., consists of interest on investment, depreciation, maintenance, repairs, taxes, and insurance. The sum of these annual charges for each building and improvement should be distributed as a cost item on the basis of the use made of the improvements. The annual charge for the use of a building intended for a specific enterprise which has been abandoned should be carried as a cost against such other enterprise as may utilize it at its value for that purpose. If no use is made of the building, the annual charge should go directly to the profit and loss account.

Land and land improvements.—Land charge covers the value of the use of the land, including drains, fences, and irrigation systems. The charge is made up of interest on investment, taxes, upkeep of drains, etc.

In determining the interest item, both land value and interest rate are involved. Prevailing local prices of land, exclusive of buildings, should be taken as the land value, and the prevailing rate of interest at which money may be borrowed on well-secured farm loans as the interest rate. In localities where such influences as speculation or discovery of oil or use for town lots have affected the price of land the rental value may be taken into consideration in determining a fair charge for the use of the

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land. When dealing with the farm as a whole, this method applies to farms operated under any and all forms of tenure. In determining costs and returns to tenant and landlord, the actual terms of the contract should be considered. It is desirable on tenant farms that the records be so kept as to show separate statements for landlord and tenant and a combined statement for the entire farm.

Manure should be charged at a value indicated by the farmer's experience as based on increased crop profits, or market values.

Green manure.—Green-manure crops should be charged at the cost of production.

Perennial crops.—In general the cost of establishing a crop or bringing it to bearing age should be charged annually over the probable productive life of the crop.

General expense or overhead may be defined as the sum of those expenses which can not be charged directly or apportioned on the basis of use, but which must be apportioned by arbitrary means.

No charges should be included in general expense or overhead that can be distributed by any other method. General expense or overhead should be distributed to the farm enterprise on the basis of direct costs (labor, materials, and cash cost) or on the basis which offers the best measure of its use.

Interest.—The interest charge for investment in live stock, machinery, and other equipment, including cash working capital, should be at the actual rate paid for money borrowed, or at the prevailing rate of interest at which money may be borrowed on well-secured farm loans.

Residual values.—With materials having a residual value (as manures, fertilizers, lime, etc.), the entire cost of application should be distributed to the crops of that year in proportion to the benefits derived from the general fertilizer practice on the farm in question. Where the farm is operated on a definite plan, this proportion is to be determined by the investigator.

Example with manure:

In a 4-year rotation on retentive clay soil, the proportions might be 40-30-20-10.

In a 4-year rotation on open sandy soil, the proportions might be 50-40-10-0.

Where the farming is not according to a definite plan, a part of the cost proportional to the residual effect may be charged against the crops of succeeding years.

BUSINESS RISKS.

There are many classes of business risk, such as loss from fire, floods, drought, hail, diseases, pests, employers' liability. When insurance is carried it is usually not for the full value, so that the farm carries the balance of the risk.

When insurance is paid for any business risk it should be charged to the proper account. If not paid no charge is made, but the profits of the industry should be sufficient to cover uninsured business risks.

INVENTORIES.

The farm inventory should be a detailed list of the property used in the farm business. Each class of land and each of the main buildings, as well as the larger implements and tools, should be inventoried separately. The smaller tools may be inventoried as a group. All live stock should be listed separately so far as practicable. The inventory should also include feed and supplies on hand, unsold crops, growing crops, etc.

Values should be conservative and in keeping with current market prices for similar farm property. Allowance for depreciation should be based on the cost of a particular piece of property, its probable life and salvage value, due consideration to be given for current repairs and extraordinary wear and tear.

If at any time the inventory value of land, buildings, improvements, work stock, or machinery is written up or down to keep pace with the advance or decline in market values, the amount should not enter into cost records, but should be carried directly to profit and loss.

AN ACCOUNT BETWEEN THE FARM AND THE FARMER.

The farmer should be charged with the use of the house on the basis of charges stated under "Farm improvements."

The method of charging garden land is discussed under "Land."

Farm products used by the farmer should be charged at their farm sale value.

Labor of men and horses for the personal use of the farmer should be charged on the same basis as for farm enterprises. The method of calculating and charging labor is found under the "Labor" statement.

Credits follow the same general principles.

INTERPRETATION OF RESULTS.

Various points of view are held by accountants as to the place in the accounts for interest, the charge for the operator's labor, and as to the methods of charging farm produced supplies. These differences in method have arisen because of the different purposes for which accounts are kept. Some public accountants omit interest and a charge for the operator's labor as cost items and include them as allowances, and produced supplies are often charged at cost.

In farm cost accounting it is desirable that the time of the farmer, the value of farm-grown products, and the charge for use of capital all be included as cost, in order that comparisons may be made between different farm enterprises. The statement of results, however, should show the details of these and all other charges so that the exact amount of the cost due to each item may be seen. The facts can then be arranged by anyone in accordance with the form in which he desires to express the data.

REPORT OF COMMITTEE APPOINTED BY THE SECRETARY OF AGRICULTURE TO CONSIDER THE SUBJECT OF FARM ORGANIZATION.

Farm organization is one of the large and important projects of the Office of Farm Management as outlined by the committee appointed by the Secretary of Agriculture to consider plan of organization, scope of work, and projects of the Office of Farm Management. The plan outlined includes seven major projects: 1. Cost of production; 2. Farm organization; 3. Farm finance; 4. Farm labor; 5. Agricultural history and geography; 6. Land utilization; 7. Farm-life studies. Of these projects the original committee gave especial attention to the cost of production as being of primary importance. (See Circular 132, Office of the Secretary, U. S. Department of Agriculture.) Farm organization is considered as next in importance.

The successful farm is that one on which the land, labor, and equipment are so organized in the production of crops and live stock as to yield the maximum profit to the farmer consistent with the welfare of all concerned. This requires adjusting the farm activities to the market demands as well as to the physical basis of production and to the cost of each of the agencies used in production. With the rapid growth of agriculture in the United States many farms have been developed without due reference to the market and to the best methods of handling the crops and live stock and their disposition on the farm or in the market.

Under the heading of farm organization in the Office of Farm Management in this department and in the investigational work of some of the State institutions projects have been taken up which more properly belong to the field of agronomy, animal husbandry, horticulture, agricultural engineering, and other subject-matter divisions. This has resulted in some discussion as to farm organization studies that should be carried on by farm-management investigators. If the work in farm management and farm economics is to be developed in an effective and harmonious way, it seems necessary that the field of farm organization be clearly defined.

With this in mind, the Secretary of Agriculture called a conference, April 17, 18, and 19, to give especial consideration to the subject of farm organization. The following persons were in attendance:

Prof. Alva Agee, secretary State department of agriculture, Trenton, N. J.

Mr. J. B. Andrews, University of Illinois, Urbana, Ill.

Prof. Frank App, College of Agriculture, New Brunswick, N. J.

Director T. P. Cooper, College of Agriculture, Lexington, Ky.

Prof. H. M. Eliot, College of Agriculture, College Station, Tex.

Prof. J. R. Fain, College of Agriculture, Athens, Ga.

Dr. J. I. Falconer, College of Agriculture, Columbus, Ohio.

Mr. H. W. Jeffers, Plainsboro, N. J.

Prof. K. C. Livermore, College of Agriculture, Ithaca, N. Y.

Mr. A. W. Manchester, Storrs, Conn.

Prof. H. B. Munger, College of Agriculture, Ames, Iowa.

Dean E. C. Johnson, Agricultural College, Pullman, Wash.

Mr. L. S. Robertson, Purdue University, Lafayette, Ind.

Prof. Daniel Scoates, Agricultural College, Miss.

Mr. L. D. Sweet, Denver, Colo.

Director P. F. Trowbridge, Agricultural Experiment Station, Fargo, N. Dak.

Dr. A. F. Woods, president State College of Agriculture, College Park, Md.

22 ESTIMATES OF APPROPRIATIONS, OFFICE OF FARM MANAGEMENT.

Mr. E. C. Chilcott, in charge, Dry-Land Agriculture Investigations, Bureau of Plant Industry.

Mr. J. F. Cook, assistant to the secretary.

Dr. Bradford Knapp, Chief, Office of Extension Work South, States Relations Service.

Dr. C. W. Larson, Dairy Division, Bureau of Animal Industry.

Mr. C. V. Piper, in charge, Forage-Crop Investigations, Bureau of Plant Industry.

Mr. George M. Rommel, Chief, Animal Husbandry Division, Bureau of Animal Industry.

Mr. J. H. Arnold, Office of Farm Management.

Mr. G. A. Billings, Office of Farm Management.

Mr. H. M. Dixon, Office of Farm Management.

Prof. C. L. Goodrich, Office of Farm Management.

Mr. H. A. Miller, Office of Farm Management.

Mr. L. A. Moorhouse, Office of Farm Management.

Mr. F. W. Peck, Office of Farm Management.

Mr. H. R. Tolley, Office of Farm Management.

Dr. H. C. Taylor, Chief, Office of Farm Management.

Prof. G. I. Christie, Assistant Secretary of Agriculture.

The conference, after careful consideration of the subject, outlined the research work which should be taken up under the head of farm organization. Suggestions were also made as to the line of demarcation between farm management and farm economics investigations and crop, live-stock, and other subject-matter investigations. The conference also suggested closer cooperation between the Office of Farm Management and the State agricultural colleges and experiment stations, and recommended that the work in farm organization be enlarged and carried forward in a vigorous way.

The report of the committee has been carefully considered by the Secretary of Agriculture and has received his approval. He has authorized the Office of Farm Management to proceed with plans for the work.

The Office of Farm Management is now seeking a leader for the farm organization division. It is hoped that a strong and competent man can be secured at an early date, so that the work may go forward in a strong way.

G. I. CHRISTIE, Assistant Secretary.

MAY 9, 1919.

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, April 19, 1919.

Hon. DAVID F. HOUSTON,
Secretary of Agriculture.

DEAR MR. SECRETARY: Your committee called by you for consideration and discussion of the subject of farm organization as one of the divisions of research work of the proposed Bureau of Farm Management and Farm Economics, and the relation of the bureau to the States, submit the accompanying report.

Our discussions covered principally the following points:

1. An outline of the research work which seems to come logically under the head of farm organization.

2. A suggested statement of the line of division between farm economics investigations and crop or live-stock investigations when dealing with single enterprises; and a suggested method of procedure when dealing with those economic problems of single-crop or stock enterprises which seem to be in the fields of both the farm economics subjects and the crop or stock subjects.

3. An expression of opinions of the usefulness of different methods of investigation as applied to farm-organization problems.

4. A suggested method of cooperation with the State colleges and experiment stations in farm-management and farm-economics investigations.

The conference wishes to indorse the recommendations made by a preceding committee, whose report is published in Circular 132, Office of the Secretary, United States Department of Agriculture, especially the recommendation made on page 6, which is as follows:

"In recognition of the work already accomplished in farm economics along with the investigational work in farm management, and in view of the great need for still fur-

ther economic studies of the farming business, the committee recommends that the office be expanded to include both farm management and farm economics under the name of 'Bureau of Farm Management and Farm Economics.'"

Respectfully submitted.

George A. Billings, H. R. Tolley, H. M. Dixon, F. W. Peck, John R. Fain,
 A. W. Manchester, Lynn Robertson, C. L. Goodrich, J. H. Arnold,
 P. F. Trowbridge, Edward C. Johnson, J. B. Andrews, C. V. Piper,
 Frank App, G. I. Christie, Thomas Cooper, Lou D. Sweet, L. A. Moorhouse,
 Junius F. Cook, J. I. Falconer, H. B. Munger, K. C. Livermore,
 H. M. Eliot, D. Scotes, A. F. Woods, E. C. Chilcott, Bradford Knapp,
 Geo. M. Rommel, H. C. Taylor, H. A. Miller, C. W. Larson.¹

FARM ORGANIZATION.

The conference has given careful attention to the problem of farm organization as a division of the work of the proposed Bureau of Farm Management and Farm Economics. The development of this division appears to the conference to be of great importance, as its work should provide data and information of fundamental value to the agriculture of this country. Such division of work will consider the farm problems as grouped for profit and for farm efficiency. The ideal of a successful farm is the one organized so that land, labor, and equipment are utilized in the most profitable manner in the production of agricultural products demanded by the consumer.

Such an ideal is the basis of the development of the subject matter assigned or suggested for this division of work. The business of farming must adapt itself to the natural and physical factors as well as to the economic factors. The farmer usually makes adjustments slowly and in response to long-continued economic pressure. Often more rapid changes would prove profitable to the farmer and to the Nation and it is believed that our agricultural agencies furnished with the necessary information may hasten the adjustment in farm organization by presenting facts in farm management developed by this section.

The conference commends the action of the former committee appointed by the Secretary of Agriculture in recommending the continuation and expansion of investigational work in farm management. We especially recommend that the division of farm organization be headed by a strong, capable man. The conference submits an outline of the subject matter, a discussion of methods, and a suggestion as to the relationship that should exist between the United States Department of Agriculture and the State colleges or experiment stations.

OUTLINE OF STUDIES TO BE MADE IN FARM ORGANIZATION.

I. Types of farming:

(a) Determination of enterprises—

1. Climate.
2. Soil.
3. Topography.
4. Marketing costs.

(b) Balance or combination of enterprises—

1. Labor distribution.
2. Fertility maintenance and utilization.
3. Utilization of land.
4. Utilization of by-products and wastes.
5. Risks.
6. Capital.
7. Competition.
8. Fluctuations in prices, wages, land values, etc.

II. Size of business:

(a) Measured by—

1. Work units.
2. Acres, number of animals, etc.

(b) Farm unit—

¹ Prof. Alva Agee and Mr. H. W. Jeffers were unable to attend the session of the committee at which the report was signed, and for that reason their names do not appear in the above list.

- III. Farm plan or layout:
 - (a) Field arrangement.
 - (b) Farmstead arrangement.
 - (c) Interior building arrangement.
- IV. Effective use of labor and equipment.
- V. Intensity of production:
 - (a) Crops.
 - (b) Live stock.
- VI. Business methods.

The investigation of types of farming should attempt first to explain the present geographical distribution of crops and different kinds of live stock. The distribution is determined in most cases by one or more of the following factors: Climate, soil, topography, and marketing costs. Marketing costs here refer to all the costs of delivering the product from the farm to the primary market. Transportation usually is the largest of these costs.

Second. The investigations of types of farming should attempt to explain the balance between the enterprises that are possible in a locality which results from the effort to secure under given price conditions the most profitable distribution of labor, the maintenance of fertility, and the utilization of manures, land, by-products, and wastes, and to meet as advantageously as possible other problems.

In studying size of business, size may be measured in several ways. When farms vary to a considerable extent in respect to type, work units may prove the most satisfactory measures, since they are based on amount of productive work.

In the investigation of the general subject of the economic farm unit the following points are suggested for consideration:

1. The term "farm unit" should be the measure of the size of the farm business that is handled from one base of operations.

2. The factors influencing the size of the farm unit are the region and the type of farming. This unit may be influenced by limiting factors such as available labor, size and type of machinery, managerial ability, and available capital.

3. The minimum and maximum farm unit that can be made an economic success in a community may be determined, as well as the optimum farm unit for the existing population.

On many farms a large proportion of the total work is done in and about the buildings. Investigations of layout or the farm plan should include, therefore, not only field arrangement but also the arrangement of buildings and other parts of the farmstead and the interior arrangement of the buildings.

The topic, effective use of labor and equipment, is intended to cover not only the efficient direction of these agencies, but also their most effective adjustment to the work planned and the most profitable substitution of horsepower for man labor and of machine power for both men and horses.

Investigations relating to intensity of production may deal with the law of diminishing returns as it is found in agriculture and the determination of the optimum rates of production as affected by such varying factors as prices of products and costs of labor, land, and materials.

Under business methods the following items are suggested for investigation: Insurance practices, record and account keeping, buying practices, speculative holdings of products, etc.

COOPERATION BETWEEN FARM MANAGEMENT AND OTHER DIVISIONS OF WORK IN ECONOMIC INVESTIGATIONS OF SINGLE ENTERPRISES.

Farm management involves the study of the economics of crop or live-stock systems, or both combined, in the general farm organization.

Single farm enterprises often involve economic as well as physical and biological problems. Economic studies of a single enterprise should have the joint approval of the farm management and any subject-matter departments concerned before being undertaken.

SUGGESTED CHANGE IN THE OUTLINE OF THE RESEARCH WORK OF THE OFFICE OF FARM MANAGEMENT.

Your committee was requested to report any changes in or additions to the outline of the research work printed on page 7 of Circular 132, Office of the Secretary, U. S. Department of Agriculture.

The committee suggests that the following be substituted for division 3 in that outline:

3. Farm finance and farm relations.

- (a) Financing, taxation, insurance, etc.
- (b) Relation to outside influences.
 - 1. War influences.
 - 2. Extension activities.
 - 3. Legislative influences.
 - 4. Banking influences.
 - 5. Organization influences.
 - 6. Community action.
 - 7. Speculators' influence.
 - 8. Commercial influence.
 - 9. Etc.

METHODS OF STUDYING FARM ORGANIZATION.

A. Survey method.

This method may be used in making such studies as—

- 1. Labor income.
- 2. Farm enterprises.
- 3. Farm practices.
- 4. Farm costs.

The value of this method depends upon—

- 1. Trained investigators.
- 2. Sufficient numbers of records.
- 3. Representative data.

B. Cost accounting method.

This method is valuable—

- 1. For providing basic unit factors of farm production, which are essential to the proper farm organization, such as—
 - (a) Labor requirements.
 - (b) Feed requirements.
 - (c) Material requirements.
- 2. As a check on more extensive methods of farm analysis, and also to compare the results obtained by other methods.

C. Observation method.

This method should be of value when used as preliminary or supplementary to other investigational work. It should not serve as a basis for conclusions.

D. Geographic method.

This method is valuable as a means of contributing information concerning the physical and economic factors which influence farm organization—

- 1. Climate.
- 2. Soil.
- 3. Topography.
- 4. Transportation.
- 5. Marketing facilities.
- 6. Market prices.

E. Historical method.

This method is valuable—

- 1. As a means of understanding the development of the farming industry.
- 2. To assist in the interpretation of the trend of agricultural production.

F. Statistical method.

This method, although involved in the other methods mentioned, may be used as a direct means of studying farm organization.

This method may be used for such studies as—

- 1. Cycle of production.
- 2. Price relationships.
- 3. Types of farming.

G. Experimental method.

The experimental method may be used to advantage in the study of certain problems, such as—

- 1. The proper degree of intensive culture.
- 2. The right balance of enterprises.
- 3. The proper unit of organization.

COOPERATION BETWEEN OFFICE OF FARM MANAGEMENT AND AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

Your committee highly recommends the previous action of the committee appointed by the United States Department of Agriculture in recommending that investigations in farm management be carried on in cooperation with the State colleges or experiment stations. The combination of resources and effective workers of these institutions can not fail to increase greatly the body of knowledge that will be made available and will further its use by the farmers.

Your prior committee has cogently pointed out the benefits of effective cooperation in investigations and in view of these facts it is advised that States, as rapidly as possible, organize departments or divisions to carry on investigations in farm management and farm economies.

The following method of procedure in initiating relationships is suggested:

1. Projects for cooperative investigation may be proposed through either the proper administrative officers of the United States Department of Agriculture or of the State colleges or experiment stations.

2. Personal consultation between Federal and State representatives is advised in initiating all important phases of investigational work.

3. The college or experiment station and the United States Department of Agriculture should agree mutually upon the designation of an individual to act as joint leader of farm management and farm economics investigations for the State and the Department of Agriculture.

4. A memorandum of agreement should be drawn up between the United States Department of Agriculture and the State college or experiment station, embodying the following points:

(a) Cooperative relations and methods of work.

Cooperative investigations in farm management and farm economics should be established in the various States upon the most equitable basis possible, in view of the conditions that exist within the States and the United States Department of Agriculture.

(b) Personnel.

It is recommended that when investigators and employees of the Bureau of Farm Management and Farm Economics are assigned to a State for work, they shall be considered as members of the Farm Management and Farm Economics staff in the State institution concerned, and thus represent the United States Department of Agriculture and the State. Men selected for work in the State shall be approved by the contracting parties, namely, the United States Department of Agriculture and the State college or experiment station. In the event that institutions do not have a Farm Management and Farm Economics staff it is then recommended that any man assigned to work with the institution shall be considered a member of the investigational staff of the institution, his work to be administered in the usual manner in that institution.

(c) Approval of projects.

All projects undertaken by joint representatives or by investigators assigned to institutions shall be subject to approval by the interested authorities in the State concerned and by the Bureau of Farm Management and Farm Economics, United States Department of Agriculture. The projects within the State should be administered by the college or experiment station.

(d) Publication of data.

The suggestion made by the prior committee, in Circular 132, is indorsed and recommended as a basis of action, viz, "Data collected by cooperative effort should be equally available to both parties. Neither party should publish any of the data without consultation with the other party. In case of refusal to publish on the part of either party, the other party shall be free to publish the data on its own responsibility."

(e) Regional studies.

The larger regional or national projects undertaken by the United States Department of Agriculture shall be conducted in cooperation with the State colleges or experiment stations included within the region. In initiating the cooperation the various administrative officers of the States and the United States Department of Agriculture should be called together in so far as practicable to discuss the form of the projects which shall be mutually undertaken. It is recognized that the preparation and publication of material covering a region involving two or more States is peculiarly a function of the United States Department of Agriculture, and that the investigation may best be carried out through cooperation with the several States concerned.

ESTIMATES OF APPROPRIATIONS, OFFICE OF FARM MANAGEMENT. 27

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1920,
by the Department of Agriculture.*

[NOTE.—The following revised estimates should be substituted for the estimates of the Office of Farm Management appearing on pages 183 and 184 of the Book of Estimates for 1920.]

Detailed objects of expenditures, and explanations.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1919.
OFFICE OF FARM MANAGEMENT.		
<i>Salaries (Office) Bureau of Farm Management and Farm Economics—</i>		
1 chief of (office) <i>bureau</i> (from \$4,000 to \$5,000, increase of \$1,000 (1 assistant to the chief, \$2,520, omitted) (submitted) (R. S., p. 87, secs. 520-523; acts Mar. 4, 1915, vol. 38, p. 1087, sec. 1; Oct. 1, 1918, vol. 40, p. 974, sec. 1).....	\$5,000	
1 editor (new) (1 executive assistant, \$2,250, omitted).....	2,340	
1 assistant in charge of accounting (new).....	2,000	
2 clerks, class 4 (R. S., p. 87, secs. 520-523; acts Mar. 4, 1915, vol. 38, p. 1087, sec. 1; Oct. 1, 1918, vol. 40, p. 974, sec. 1).....	3,600	
4 clerks, class 3 (increase of 2) (same acts).....	6,400	
5 clerks, class 2 (increase of 2) (same acts).....	7,000	
15 clerks, class 1 (increase of 7, 2 by transfer from lump fund and 5 new places) (same acts).....	18,000	
10 clerks, at \$1,100 each (increase of 7) (same acts).....	11,000	
4 clerks, at \$1,080 each (1 clerk or draftsman, \$1,020, omitted) (same acts).....	4,320	
10 clerks, at \$1,000 each (same acts).....	10,000	
8 clerks, at \$900 each (decrease of 10) (same acts).....	7,200	
1 clerk or map tracer (decrease of 5) (same acts).....	840	
1 messenger or laborer (same acts).....	720	
1 messenger, messenger boy, or laborer (same acts).....	660	
4 messengers, messenger boys, or laborers, at \$480 each (same acts)	1,920	
5 charwomen, at \$240 each (same acts).....	1,200	
1 library assistant (1 library assistant, \$900, omitted) (same acts).....	1,440	
1 photographer (same acts).....	1,400	
1 cartographer (from \$1,500 to \$2,040, increase of \$540 (submitted) (same acts).....	2,040	
1 draftsman (from \$1,440 to \$1,800, increase of \$360 submitted) (same acts).....	1,800	
1 draftsman (new).....	1,440	
1 draftsman (from \$1,200 to \$1,440, increase of \$240 submitted) (R. S., p. 87, secs. 520-523; acts Mar. 4, 1915, vol. 38, p. 1087, sec. 1; Oct. 1, 1918, vol. 40, p. 974, sec. 1).....	1,440	
1 draftsman (new).....	1,320	
1 draftsman (by transfer from lump fund at \$1,100 to \$1,320, increase of \$220 submitted) (R. S., p. 87, secs. 520-523; acts Mar. 4, 1915, vol. 38, p. 1087, sec. 1; Oct. 1, 1918, vol. 40, p. 974, sec. 1).....	1,320	
2 draftsmen, at \$1,120 each (from \$900 to \$1,120, increase of \$220 each submitted) (same acts).....	2,240	
		\$96,640
<i>General expenses, (office) Bureau of Farm Management and Farm Economics—</i>		\$83,430
For the employment of persons in the city of Washington and elsewhere, furniture, supplies, traveling expenses, rent outside of the District of Columbia, and all other expenses necessary in carrying out the work herein authorized, as follows (acts Mar. 4, 1915, vol. 38, p. 1087, sec. 1; Oct. 1, 1918, vol. 40, p. 974, sec. 1):		
(To investigate and encourage the adoption of improved methods of farm management and farm practice, \$221,660.)		
To investigate the cost of production of farm products, to study problems connected with farm finance, farm labor, land utilization, ownership and tenancy, and rural-life conditions, and to promote improved farm organization methods.....	515,350	221,660
NOTE.—It is estimated that this sum will be expended as follows:		
1. Cost of production of farm products.....	\$244,890	
2. Farm organization.....	53,600	
3. Farm finance and farm relations.....	21,560	
4. Agricultural history and geography.....	29,200	
5. Land economics (land utilization).....	112,920	
6. Farm-life studies.....	20,560	
7. Demonstration activities (extension work).....	32,820	
	515,350	
Total for Bureau of Farm Management and Farm Economics.....	611,990	305,090
Total of revised estimates.....		\$611,990
Total of original estimates.....		305,090
Increase of.....		306,900









